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Case report

Warthin's tumor of the lacrimal caruncle

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ABSTRACT

Warthin's tumor is an extremely rare lesion of the lacrimal caruncle, and ophthalmologists may never encounter this lesion in their careers. In addition, pathologists see this lesion in salivary gland tissues, but not in specimens submitted from the anatomic eye. Here, we report a rare case of a Warthin's tumor originating in a lacrimal caruncle.

1. Introduction

Warthin's tumor (WT), or papillary cystadenoma lymphomatosum, is a benign salivary gland neoplasm, primarily occurring in the parotid gland.[1] It is the second most common benign neoplasm encountered in the parotid gland, the first being the pleomorphic adenoma.[1] WT accounts for approximately 4–11.2% of all salivary gland tumors, with extremely rare cases being reported in other anatomic sites.[1–3] These rare reports, however, involve the minor salivary glands and the head and neck region.[1,4] It is with this in mind that we report a rare case of WT involving the right human caruncle.

2. Case report

A 90-year-old male presented to his primary care physician with the chief complaint of a right eye growth of approximately 2 months' duration. The patient reported that the growth had been "getting bigger" for the past 2 months. He was referred to an ophthalmologist for evaluation of this lesion in the right caruncle, with a referring clinical diagnosis of conjunctivitis.

The ophthalmologist examined the patient and documented a 0.3 cm pedunculated, vascular, red-colored lesion with a central dimple located in the right caruncle. The patient was treated conservatively with topical antibiotics and a steroid injection. The steroid treatment consisted of one course of 0.3 mL of triamcinolone acetonide (40 mg/mL) directly into the lesion. After a brief follow-up period, the patient did not respond to the treatment, and an excisional biopsy was performed.

The patient reported having had bilateral cataract surgery in 2004, as well as chronic medical problems of chronic obstructive pulmonary disease, asthma, hypertension, osteoarthritis, hearing loss, gout, and a previous tuberculosis infection. A pertinent negative, however, is that the patient denied a smoking history.

2.1. Pathologic findings

Our pathology laboratory received one small gray–brown piece of soft tissue measuring 0.6 cm × 0.3 cm × 0.2 cm. Hematoxylin and eosin-stained sections demonstrated a well-circumscribed tumor with adjacent separated caruncular mucosa (Figs. 1, 2, 4 and 5). The tumor showed microcystic spaces filled with eosinophilic debris. The lining epithelial cells demonstrated a tall, columnar, oncocytic bilayer formation, with granular eosinophilic cytoplasm. The nuclei were round to ovoid in shape with some showing unremarkable nucleoli (Figs. 2 and 3). The tumor stroma showed abundant lymphoid tissue and multiple prominent lymphoid follicles (Figs. 1 and 2). The tumor was pathologically diagnosed as a Warthin's tumor.

3. Discussion

Warthin's tumor is primarily a benign tumor of the parotid gland and rarely the minor salivary gland tissue. It is the second most common tumor of the parotid gland and accounts for approximately 4–11% of all salivary gland tumors.[1,4] Several authors have reported rare occurrences of WT in other anatomic sites.[1] However, of all the reported lesions of the eye and orbit, only rare cases of this tumor have been reported that involve the

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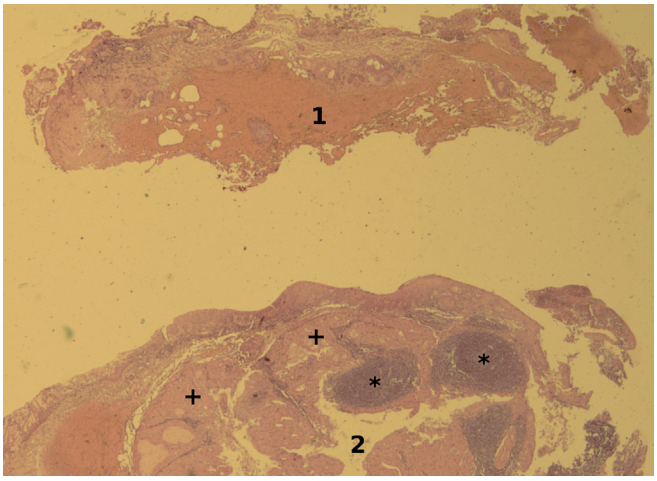

Fig. 1. This low power view shows caruncle mucosa at the top (1) with a Warthin's tumor at the bottom (2). The lymphoid follicles (*) are prominent and surrounded by a bilayer of tall columnar oncocytic cells (+). H&E stain, 2X.

caruncle, lacrimal gland, and eyelid.[2,3] On review of the medical literature, only one previous report of WT involving the left caruncle of a 68-year-old female was reported by Oaks and Jenson in 1963.[2] As of the date of writing, there have been no other reported cases of WT involving a caruncle.

As mentioned above, this patient reported a negative smoking history. This is important since smoking has been documented as a

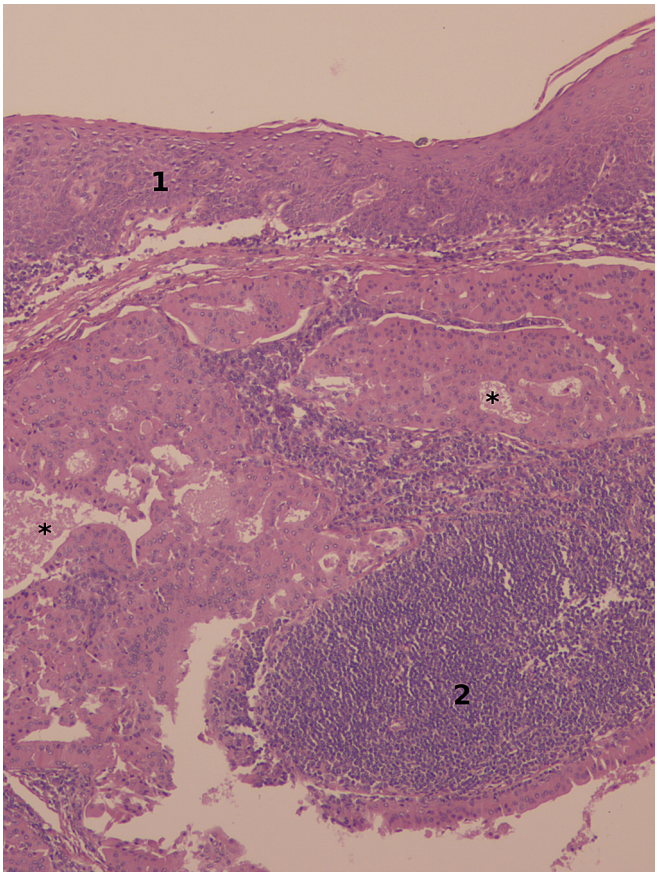

Fig. 2. Medium-power view of the Warthin's tumor showing caruncular squamous epithelium (1), lymphoid follicles (2), and microcystic spaces (*) filled with eosinophilic debris. The epithelial cells lining the Warthin's tumor demonstrated a tall, columnar, oncocytic bilayer formation, with granular eosinophilic cytoplasm. H&E stain, 10X.

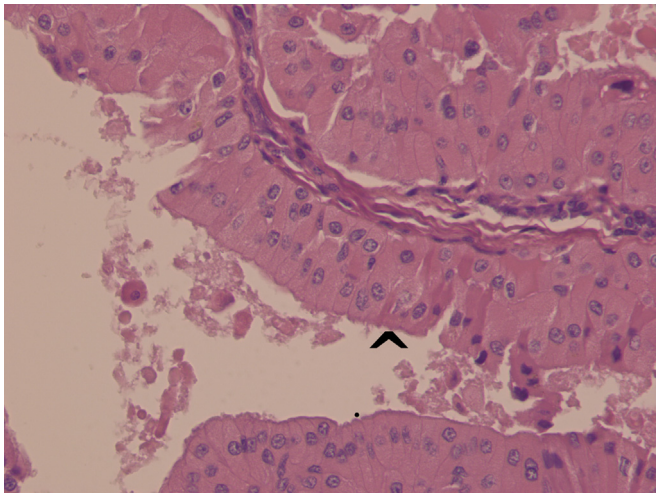

Fig. 3. High-power view of the Warthin's tumor showing the tall columnar oncocytic granular eosinophilic bilayer (^) with round to ovoid nuclei. H&E stain, 40X.

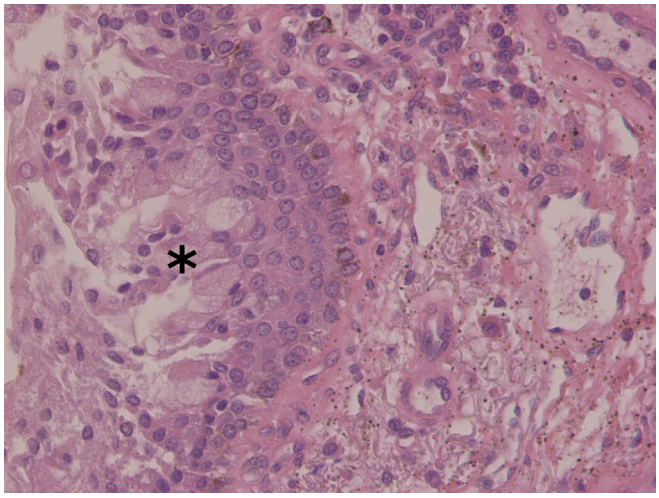

Fig. 4. High power view of goblet cells (*) identified within the stratified squamous epithelium of the caruncular mucosa. H&E stain, 40X.

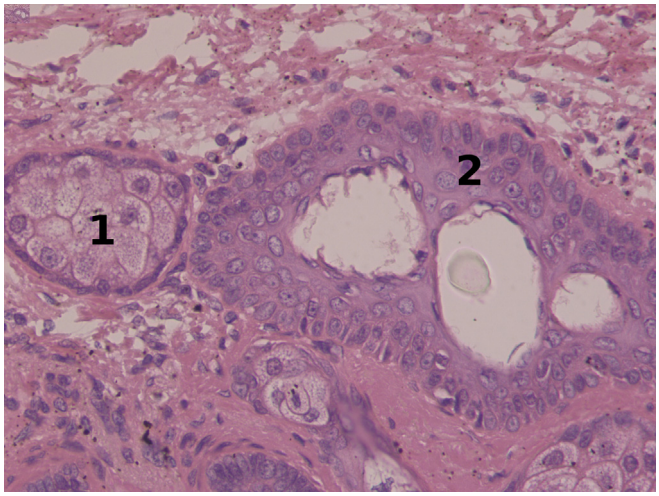

Fig. 5. High power (40X) view of sebaceous glands (1) and hair follicles (2) identified in the caruncular mucosa. H&E stain, 40X.

risk factor in the neoplastic development of WT.[5,6] However, the association between smoking and WT has only been studied in patients diagnosed with WTs that arise from salivary gland tissues, especially the parotid gland.[5,6] Although smoking is a risk factor for developing WT in salivary gland tissues, we are not aware of any citations in the medical literature that address and/or link smoking and WT occurring in the anatomic eye.

We reviewed multiple articles relating to lesions and/or tumors of the caruncle, but not one reported a genuine case of WT.[7–12] Therefore, we believe that this case represents the first reported WT of the right lacrimal caruncle in a male patient.

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